

WHAT IS CLAIMED IS:

1 1. A mobile browser system with adaptive personalization and audio feedback
2 capability for retrieving information from an information network, the information
3 network comprising a plurality of network servers, the browser system comprising:
4 a wireless communication interface operable to transmit data to one or more of
5 the plurality of network servers, to receive user input, and to receive
6 data from one or more of the plurality of network servers, wherein the
7 data transmitted to the one or more of the plurality of network servers
8 includes a request for information, and the data received from the one
9 or more of the plurality of network servers includes information
10 responsive to the request;
11 an audio interface operable to receive data from the wireless communication
12 interface; and
13 an adaptive personalization module operable to monitor the user input during
14 one or more previous sessions with the browser system, and to
15 determine the order for presenting the requested information based on
16 previous user input.

1 2. The browser system, as set forth in claim 1, wherein the adaptive
2 personalization module is further operable to update a user's model based on the
3 previous user input and the user's model is used to determine the order for presenting
4 the requested information.

1 3. The browser system, as set forth in claim 1, wherein the adaptive
2 personalization module is further operable to update a user's model based on whether
3 the user input a command to skip playback of the requested information.

1 4. The browser system, as set forth in claim 1, wherein the adaptive
2 personalization module is further operable to update a user's model based on whether
3 the user input a command to fast-forward or rewind playback of the requested
4 information.

1 5. The browser system, as set forth in claim 1, wherein the adaptive
2 personalization module is further operable to update a user's model based on whether
3 the user requested more detail on the requested information.

1 6. The browser system, as set forth in claim 1, wherein the adaptive
2 personalization module is further operable to generate a representation of each piece
3 of content in the requested information, and the order of presentation of the requested
4 information is determined based on the user's model and the representation.

1 7. The browser system, as set forth in claim 1 wherein the adaptive
2 personalization module is further operable to determine whether the requested
3 information is redundant compared to information presented during a previous
4 session.

1 8. The browser system, as set forth in claim 1 wherein the adaptive
2 personalization module is further operable to determine whether a piece of content in
3 the requested information is redundant compared to one or more other pieces of
4 content in the requested information.

1 9. The browser system, as set forth in claim 6 wherein the adaptive
2 personalization module is further operable to convert the responsive information from
3 a text format to an audio format, and the representation includes the frequency with
4 which each word occurs in each piece of content.

1 10. The browser system, as set forth in claim 6 wherein the adaptive
2 personalization module is further operable to convert the responsive information from
3 an audio format to a text format, and the representation includes the frequency with
4 which each word occurs in each piece of content.

1 11. The browser system, as set forth in claim 1, further comprising a user
2 interface operable to allow the user to generate and modify a playlist, wherein the
3 playlist is included in the user's model.

1 12. The browser system, as set forth in claim 11, wherein the user interface is
2 a graphical user interface.

1 13. The browser system, as set forth in claim 11, wherein the user interface is
2 an audio interface.

1 14. The browser system, as set forth in claim 11, wherein the user interface is
2 a telephone interface.

1 15. The browser system, as set forth in claim 11, wherein the user interface is
2 a wireless telephone interface.

1 16. The browser system, as set forth in claim 1, wherein the adaptive
2 personalization module is further operable to generate and modify a user's playlist.

1 17. The browser system, as set forth in claim 1, further comprising:
2 a mobile audio device having an audio converter, the audio converter being
3 operable to receive the information responsive to the request, the audio
4 converter being further operable to convert the responsive information
5 to an audio signal for output to an audio output device, wherein the
6 audio converter outputs the audio signal to a short-range wireless
7 radio, the short-range wireless radio being operable to broadcast the
8 audio signal to a channel on a car radio.

1 18. A mobile information network browser device with feedback capability
2 for retrieving information from an information network, the information network
3 comprising a plurality of network servers, the browser device comprising:
4 a communication interface operable to transmit a request for information to a
5 network server, and to receive data responsive to the request from the
6 network server;
7 a mobile audio device operable to transmit the request for information to the
8 communication interface and to receive data responsive to the request
9 from the communication interface, the mobile audio device being

10 further operable to receive input from a user, to convert the input to a
 11 digital signal, and to transmit the digital signal to the communication
 12 interface, the mobile audio device being further operable to receive the
 13 data responsive to the request from the communication interface, and
 14 to convert the data to an audio signal for output to an audio output
 15 device; and
 16 an adaptive personalization module operable to monitor the user input during
 17 one or more previous sessions with the browser device, and to
 18 determine the order for presenting the requested information based on
 19 previous user input.

1 19. The browser device, as set forth in claim 18, further comprising:
 2 a voice interaction system operable to recognize commands from a user's
 3 speech input for interaction with the browser device including the
 4 request for information.

1 20. The browser device, as set forth in claim 18, wherein the adaptive
 2 personalization module is further operable to update a user's model based on the
 3 previous user input and the user's model is used to determine the order for presenting
 4 the requested information.

1 21. The browser device, as set forth in claim 18, wherein the adaptive
 2 personalization module is further operable to update a user's model based on whether
 3 the user input a command to skip playback of the requested information.

1 22. The browser device, as set forth in claim 18, wherein the adaptive
 2 personalization module is further operable to update a user's model based on whether
 3 the user input a command to fast-forward or rewind playback of the requested
 4 information.

1 23. The browser device, as set forth in claim 18, wherein the adaptive
 2 personalization module is further operable to update a user's model based on whether
 3 the user requested more detail on the requested information.

1 24. The browser device, as set forth in claim 18, wherein the adaptive
2 personalization module is further operable to generate a representation of each piece
3 of content in the requested information, and the order of presentation of the requested
4 information is determined based on the user's model and the representation.

1 25. The browser device, as set forth in claim 24, wherein the adaptive
2 personalization module is further operable to convert the responsive information from
3 a text format to an audio format, and the representation includes the frequency with
4 which each word occurs in each piece of content.

1 26. The browser device, as set forth in claim 24, wherein the adaptive
2 personalization module is further operable to convert the responsive information from
3 an audio format to a text format, and the representation includes the frequency with
4 which each word occurs in each piece of content.

1 27. The browser device, as set forth in claim 18, wherein the adaptive
2 personalization module is further operable to determine whether the requested
3 information is redundant compared to information presented during a previous
4 session.

1 28. The browser device, as set forth in claim 18 wherein the adaptive
2 personalization module is further operable to determine whether a piece of content in
3 the requested information is redundant compared to one or more other pieces of
4 content in the requested information.

1 29. The browser device, as set forth in claim 18, further comprising a user
2 interface operable to allow the user to generate and modify a playlist, wherein the
3 playlist is included in the user's model.

1 30. The browser device, as set forth in claim 29, wherein the user interface is
2 a graphical user interface.

1 31. The browser device, as set forth in claim 29, wherein the user interface is
2 an audio interface.

1 32. The browser device, as set forth in claim 29, wherein the user interface is
2 a telephone interface.

1 33. The browser device, as set forth in claim 29, wherein the user interface is
2 a wireless telephone interface.

1 34. The browser device, as set forth in claim 29, wherein the adaptive
2 personalization module is further operable to generate and modify a user's playlist.

1 35. A mobile information network browser device with audio feedback
2 capability, the information network comprising a plurality of network servers, the
3 browser device comprising:
4 a communication interface operable to receive data from at least one of the
5 network servers;
6 a mobile audio device operable to receive the data from the communication
7 interface, the mobile audio device being further operable to convert the
8 data to an audio signal for output to a car radio; and
9 an adaptive personalization module operable to monitor the user input during
10 one or more previous sessions with the browser device, and to
11 determine the order for presenting the requested information based on
12 previous user input.

1 36. The browser device, as set forth in claim 35, wherein operation of the
2 mobile audio device is controlled with voice commands.

1 37. The browser device, as set forth in claim 35, wherein the communication
2 interface is operable to receive the data from a wireless communication network.

1 38. The browser device, as set forth in claim 35, wherein the adaptive
2 personalization module is further operable to update a user's model based on the

previous user input and the user's model is used to determine the order for presenting the requested information.

39. The browser device, as set forth in claim 35, wherein the adaptive personalization module is further operable to generate a representation of each piece of content in the requested information, and the order of presentation of the requested information is determined based on the user's model and the representation.

40. The browser device, as set forth in claim 35, wherein the adaptive personalization module is further operable to generate and modify a user's playlist.

41. The browser device, as set forth in claim 40, wherein the adaptive personalization module is further operable to convert the responsive information from a text format to an audio format, and the representation includes the frequency with which each word occurs in each piece of content.

42. The browser device, as set forth in claim 40, wherein the adaptive personalization module is further operable to convert the responsive information from an audio format to a text format, and the representation includes the frequency with which each word occurs in each piece of content.

43. A mobile information network browser device with audio feedback capability, the information network comprising a plurality of network servers, the browser device comprising:

a communication interface operable to receive data from at least one of the network servers;

a mobile audio device operable to receive the data from the communication interface, the mobile audio device being further operable to convert the data to an audio signal for output to a telephone; and

an adaptive personalization module operable to monitor the user input during one or more previous sessions with the browser device, and to determine the order for presenting the requested information based on previous user input.

1 44. The browser device, as set forth in claim 43, wherein operation of the
2 mobile audio device is controlled with voice commands.

1 45. The browser device, as set forth in claim 43, wherein the communication
2 interface is operable to receive the data from a wireless communication network.

1 46. The browser device, as set forth in claim 43, wherein the adaptive
2 personalization module is further operable to update a user's model based on the
3 previous user input and the user's model is used to determine the order for presenting
4 the requested information.

1 47. The browser device, as set forth in claim 43, wherein the adaptive
2 personalization module is further operable to generate a representation of each piece
3 of content in the requested information, and the order of presentation of the requested
4 information is determined based on the user's model and the representation.

1 48. The browser device, as set forth in claim 47, wherein the adaptive
2 personalization module is further operable to convert the responsive information from
3 a text format to an audio format, and the representation includes the frequency with
4 which each word occurs in each piece of content.

1 49. The browser device, as set forth in claim 47, wherein the adaptive
2 personalization module is further operable to convert the responsive information from
3 an audio format to a text format, and the representation includes the frequency with
4 which each word occurs in each piece of content.

1 50. A method of browsing an information network via a wireless
2 communication network and receiving responsive information in audio format using a
3 mobile audio device, the method comprising:
4 transmitting input from a user via the wireless communication network to a
5 data processor;
6 processing the input to determine when the user enters a valid browsing
7 command;

transmitting the browsing command to a server on the information network;
 receiving the responsive information from the server;
 adaptively determining the order for presenting the responsive information
 based on user input during one or more previous sessions with the
 mobile audio device;
 formatting the responsive information in audio format;
 transmitting the formatted audio information to the mobile audio device via
 the wireless communication network;
 generating an audio output signal in the mobile audio device; and
 transmitting the audio output signal to an audio output device.

51. The method, as set forth in claim 49, further comprising:
 recognizing commands from a user's speech input for interaction with the
 mobile audio device including the browsing command.

52. The method, as set forth in claim 49, wherein adaptively determining the
 order for presenting the responsive information includes updating a user's model
 based on the previous user input and determining the order for presenting the
 responsive information based on the user's model.

53. The method, as set forth in claim 49, wherein adaptively determining the
 order for presenting the responsive information includes updating a user's model
 based on whether the user input a command to skip playback of the responsive
 information.

54. The method, as set forth in claim 49, wherein adaptively determining the
 order for presenting the responsive information includes updating a user's model
 based on whether the user input a command to fast-forward or rewind playback of the
 responsive information.

55. The method, as set forth in claim 49, wherein adaptively determining the
 order for presenting the responsive information includes updating a user's model
 based on whether the user requested more detail on the responsive information.

1 56. The method, as set forth in claim 55, wherein adaptively determining the
2 order for presenting the responsive information includes generating a representation
3 of each piece of content in the responsive information, and the order of presentation
4 of the responsive information is determined based on the user's model and the
5 representation.

1 57. The method, as set forth in claim 49 wherein adaptively determining the
2 order for presenting the responsive information includes converting the responsive
3 information from a text format to an audio format, and the representation includes the
4 frequency with which each word occurs in each piece of content.

1 58. The method, as set forth in claim 49 wherein adaptively determining the
2 order for presenting the responsive information includes converting the responsive
3 information from an audio format to a text format, and the representation includes the
4 frequency with which each word occurs in each piece of content.

1 59. The method of claim 49 wherein the mobile audio device includes at least
2 a portion of a position-keeping system, the method further comprising:
3 providing the position of the mobile audio device to the information network
4 via the wireless communication network, wherein the responsive
5 information is based on the location of the mobile audio device.

1 60. The method, as set forth in claim 49, further comprising determining
2 whether the requested information is redundant compared to information presented
3 during a previous session, and limiting the amount of redundant information that is
4 presented to the user.

1 61. The method, as set forth in claim 49, further comprising determining
2 whether a piece of content in the requested information is redundant compared to one
3 or more other pieces of content in the requested information, and limiting the amount
4 of redundant information that is presented to the user.

- 1 62. The browser system, as set forth in claim 49, wherein adaptively
- 2 determining the order for presenting the responsive information includes modifying a
- 3 user's playlist.